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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,871	04/16/2004	Sen-Tay Chang	N1085-00205	8626
54657	7590	11/22/2005	EXAMINER	
DUANE MORRIS LLP IP DEPARTMENT (TSMC) 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103-4196			EVERHART, CARIDAD	
			ART UNIT	PAPER NUMBER
			2891	

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/825,871

Applicant(s)

CHANG, SEN-TAY

Examiner

Caridad M. Everhart

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11-15-2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4-16-04</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

Applicant's election without traverse of claims 6-14, the cancellation of claims 1-5, and the addition of claims 15-19 in the reply filed on 11-15-2005 is acknowledged.

Specification

The disclosure is objected to because of the following informalities: The expression CDA does not seem to be defined in the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 6-10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadgil, et al. (US 6,048,798).

Gadgil, et al disclose a process for minimizing process drift by cooling(col. 1, lines 10-11), and therefore controlling the temperature(col. 1, lines 49-50). The process includes the steps of passing a gas such as air(col. 6, lines 10-11) by the antenna, which is an RF antenna(col. 3, line 27). Gadgil et al discloses that the temperature control gas is passed both during processing such as etching and during the time when processing is not being carried out, and that the gas can be flow is maintained during these two separate times from two separate paths(col. 4, lines 40-43 and 49-51). Gadgil et al disclose that there is a threshold temperature, which is a target temperature(col. 4, lines 24-26). This temperature is predefined. The temperature is controlled according to the threshold temperature. Gadgil et al disclose that temperature sensors are used to monitor the temperature (col. 5, lines 57-62). The temperature of the gas is controlled(col. 5, lines 11-15), as Gadgil et al disclose that the gas is a temperature-controlled fluid. Gadgil et al further disclose that the flow rate of the gas(although He is disclosed, it was pointed out in col. 6, lines 10-11 that air may be the gas) can be controlled in order to control the temperature(col. 5, lines 57-64). Gadgil et al discloses that the substrate is biased(col. 4, lines 18-22) and that the RF source is inductively coupled in the chamber(col. 3, lines 27-31).

Gadgil et al is silent with respect to a switch.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a switch in the process taught by Gadgil et al in order to carry out the step disclosed by Gadgil et al of using two separate flow paths for the air during processing and during the time when processing was not being carried out because the

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use of a switch in order to change from one flow path to another is conventional in the art.

Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gadgil et al as applied to claim 6 above, and further in view of Leahey et al (US 6,367,410B1).

Gadgil et al is silent with respect to a dome .

Leahey et al discloses that the upper portion of the process chamber is the dome(102 in Fig. 2), and that it is important to control the temperature in this portion of the reactor(col. 1, lines 63-67). Leahey et al further teaches heat exchange from the dome(Fig. 2 shows coolant supply to the dome).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Leahey et al with the process taught by Gadgil et al because the space not completely shown by Gadgil et al in Fig. 1 above the RF distribution plate which is described in col. 4, lines 62-67 would be the dome, and in col. 5, lines 10-15 Gadgil et al disclose that there may be heat exchange to this area.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 571-272-1892. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, B. Baumeister can be reached on 571-272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Everhart
CARIDAD EVERHART
PRIMARY EXAMINER

C. Everhart
11-19-2005